

Ethan Jarrell

Software Engineer

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SUMMARY

Software Engineer focused on performance, reliability, and measurable outcomes with 7+ years of experience specializing in full-stack JavaScript development (Node.js, React), building scalable web applications, relational databases, and AWS deployment. Committed to writing clean, maintainable code, and dedicated to continuous professional development and learning, with experience in measurably improving application performance and operational efficiency. Experienced in building RESTful APIs, leveraging microservices architecture, utilizing CI/CD for frequent and reliable deployments, and implementing responsive design principles ensuring cross-platform compatibility.

TECHNICAL AND PROFESSIONAL SKILLS

- **Frontend:** JavaScript, Typescript, React, Angular, HTML, CSS, Web Applications
- **Frontend Enhancements:** Intro.js, pagination logic, dynamic rendering strategies
- **Visualization:** D3.js
- **Backend:** Node.js, Python, Perl, Flask, REST APIs, Microservices
- **Search & NLP Tools:** FAISS, sentence-transformers, semantic search, Hugging Face Transformers
- **Databases:** MySQL, SQLite, MongoDB, PostgreSQL
- **DevOps & Cloud:** AWS Lambda, AWS EC2, Gunicorn, NGINX, Linux CLI, Serverless Architecture, Docker (custom image creation, local dev containers), Version Control (Git), CI/CD Pipelines
- **Methodologies & Testing:** Agile Software Development, Scrum, Jest, Mocha, Test-Driven Development (TDD)
- **Leadership:** Mentorship, Accountability, Continuous Improvement, Flexibility

RELEVANT EXPERIENCE

FAISS Based Scripture Search Engine | Independent Project (03/2025 – Present)

Technologies: Python, Flask, React, FAISS, Hugging Face Transformers, AWS EC2, Gunicorn, NGINX, D3.js, Intro.js

- Built an interactive full-stack scripture study tool featuring a React front end and Flask back end, deployed on AWS EC2 with Gunicorn and NGINX.
- Integrated semantic search using FAISS and sentence-transformers to retrieve contextually relevant quotes from religious texts.
- Designed custom D3.js visualizations (semi-circular sunburst chart) to categorize and filter results by source.
- Implemented user onboarding with animated Intro.js wizards, dynamic pagination, and client-side filtering for optimal UX.

- Gained experience in configuring EC2 storage, managing virtual environments, and resolving deployment issues under disk constraints.

Gate Access Logging System | Independent Project (08/2024 – Present)

Technologies: AWS (Lambda, RDS, S3), Flask, Raspberry Pi, Docker, IoT

- Solved real-time monitoring and accessibility challenges by designing an IoT-based serverless gate logging system using Raspberry Pi keypads connected to AWS RDS, streamlining access management and reporting.
- Addressed difficulties in remote gate monitoring and data reporting by deploying a Flask-based web portal on AWS Lambda, providing secure and accessible real-time data.
- Code & Documentation: github.com/ajjarrel/gate-keypad

Software Engineer | Avalara (07/2021 – 04/2025)

Technology Skills: React, Node.js, SQL

- Resolved performance bottlenecks by developing scalable front-end and back-end components using React, Node.js, and SQL, resulting in smoother user interactions and increased system reliability.
- Collaborated within CI/CD workflows by monitoring build statuses, resolving code-related deployment issues, and promoting feature branches to sandbox environments for QA and operations testing.
- Improved data accuracy issues and reduced manual data corrections by integrating third-party address verification APIs, significantly enhancing customer data reliability and resulting in a 30% reduction in manual processing time.
- Provided mentorship and guidance to junior developers, fostering continuous improvement and professional growth within the team.
- Addressed slow database performance by strategically indexing SQL queries, resulting in a 50% improvement in query response times.
- Reduced internal inefficiencies and manual processes by developing automated operations tools with Node.js and React, increasing team productivity and significantly reducing manual effort.

Software Engineer | Genesys (04/2019 – 06/2021)

Technology Skills: Angular, JavaScript

- Improved low user engagement in customer training portal by implementing interactive, trackable course features using Angular and JavaScript, significantly increasing user satisfaction and content accessibility.
- Enhanced user experience and content discoverability by designing an innovative UI featuring a spreadsheet-driven course-trajectory visualization and a unique circular navigation menu, significantly improving engagement and intuitive navigation.

Software Engineer | AT&T (03/2018 – 01/2019)

Technology Skills: Perl, JavaScript

- Improved reliability and functionality of outdated customer-facing tools by building and maintaining full-stack Perl and JavaScript applications, providing customers with more reliable and responsive services.

- Successfully navigated challenges in managing multiple concurrent projects by effectively collaborating in Agile teams, ensuring on-time project delivery and improved team workflow.
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Technical Writing & Editing | Hacker Noon Contributor & Personal Blog

Focus Areas: JavaScript, React, Python, Software Engineering Concepts

- Authored technical articles generating 100k+ monthly views, simplifying complex engineering topics for new developers.
 - Wrote technical articles on MongoDB usage and data modeling, including [“Combining MongoDB Collections”](#), demonstrating practical understanding of NoSQL concepts and contributing to developer education.
 - Designed visual diagrams and educational content using Adobe Photoshop.
 - Invited for a technical writer interview with Google based on strong technical communication skills.
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Clifton Properties | Solo Full-Stack Engineer (Contract)

Technologies: Node.js, Twilio, Zapier, JavaScript

- Built and maintained customer-facing applications as the sole software engineer.
 - Designed real-time notification systems using Twilio and Zapier integrations to improve client responsiveness.
 - Worked independently in a startup environment, owning the full development lifecycle.
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Momentum Learning Bootcamp Mentorship | Guest Mentor & Instructor

Technologies: Python, Django, Web Scraping, Data Analysis

- Assisted coding bootcamp students with project development and technical skill building.
 - Delivered lectures on topics like imposter syndrome and building data-driven web scrapers.
 - Created and taught a hands-on workshop on Python-based Twitter data scraping.
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Graphic Design Experience | OT Sports (Prior Career)

Focus Areas: Visual Design, Brand Identity, UX Principles

- Designed brand assets, digital layouts, and print materials for national sports teams.
 - Developed a strong visual eye for user-centered design, now applied to front-end and UI work in software engineering.
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EDUCATION

College and Technical Training

- Front-End Web Development (React), The Iron Yard, Durham, NC, 2017
- Bachelor of Science, Graphic Design, Utah Valley University, 2009